

# FINAL LONG-TERM HABITAT MANAGEMENT PLAN

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## MARICOPA SUN SOLAR COMPLEX PROJECT, KERN COUNTY, CALIFORNIA

November 2014

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Quad Knopf

# **FINAL LONG-TERM HABITAT MANAGEMENT PLAN**

## **Maricopa Sun Solar Complex Project, Kern County, California**

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**November 2014**

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# TABLE OF CONTENTS

<i>Title</i>	<i>Page No.</i>
<b>1.0 Introduction</b> .....	1
1.1 Background .....	2
1.2 Scope and Purpose .....	2
1.3 Phasing .....	5
<b>2.0 Project Description</b> .....	5
2.1 Geography, Topography, Climate .....	5
2.2 Surrounding Land Use .....	6
2.3 Soils .....	6
2.4 Hydrology .....	6
<b>3.0 Habitats and Species</b> .....	7
3.1 Habitats .....	7
3.2 Conservation and Endangered Species Recovery Value .....	8
3.3 Sensitive Species and Vegetation Communities .....	9
<b>4.0 Management and Monitoring</b> .....	11
4.1 Goals and Objectives .....	11
4.2 Management and Personnel .....	11
4.3 Biological Resources .....	12
4.3.1 Biological Examinations .....	13
4.3.2 Vegetation Examinations .....	13
4.3.3 Vegetation Management .....	15
4.3.4 Covered Species Monitoring .....	16
4.4 Conservation Site Maintenance .....	18
4.4.1 General Examinations .....	18
4.4.2 Trash and Trespass .....	19
4.4.3 Fire Hazard Reduction .....	19
4.4.4 Fences, Gates and Signs .....	19
4.4.5 Erosion .....	20
4.5 Decommissioning .....	20
4.6 Adaptive Management .....	21
4.7 Conservation Easement Monitoring .....	22
4.8 Reporting and Administration .....	22
4.8.1 Reporting .....	22
4.8.2 Administration .....	23

<b>5.0</b>	<b><i>Transfer, Replacement, Amendments, and Notices</i></b> .....	<b>24</b>
5.1	Transfer .....	24
5.2	Replacement.....	24
5.3	Amendments .....	24
5.4	Notices .....	25
<b>6.0</b>	<b><i>Funding and Task Prioritization</i></b> .....	<b>25</b>
6.1	Funding .....	25
6.2	Prioritization .....	26
<b>7.0</b>	<b><i>References</i></b> .....	<b>26</b>

## LIST OF TABLES

<b><i>Table No.</i></b>	<b><i>Title</i></b>	<b><i>Page No.</i></b>
1	Management Plan Comparison .....	5
2	Soil Types Occurring Throughout the Maricopa Sun Solar Complex.....	7
3	Sensitive Species and Vegetation Communities.....	9

## LIST OF FIGURES

<b><i>Figure No.</i></b>	<b><i>Title</i></b>	<b><i>Page No.</i></b>
1	Regional Location of Maricopa Sun Solar Complex Project Area, Kern County, California.....	3
2	Site Plan, Maricopa Sun Solar Complex, Kern County, California.....	4

## 1.0 INTRODUCTION

The Maricopa Sun Solar Complex will be constructed within a 5,784.3-acre Permit Area, located in southwestern Kern County. Upon full build out, the Maricopa Sun Solar Complex project will result in a combination of Solar Sites (consisting of photovoltaic panels, inverters, transformers, transmission lines and other associated infrastructure), Movement Corridors (areas managed to facilitate wildlife movement around the Solar Sites), and Conservation Sites (areas managed to provide habitat for wildlife)(land types collectively, Project).

This Long-Term Habitat Management Plan (LTHMP) describes the ecological and resource management actions that will take place on the Conservation Sites, following the recordation of a Conservation Easement on each Conservation Site. The Conservation Easement will be recorded in favor of an approved 501c(3) non-profit conservation group (Conservation Easement Holder). Conservation Sites are anticipated to be added to and managed according to this LTHMP as the various Solar Sites are developed. Following decommissioning (described further herein), the Solar Sites and Movement Corridors will be converted to Conservation Sites and then also be managed according to this LTHMP.

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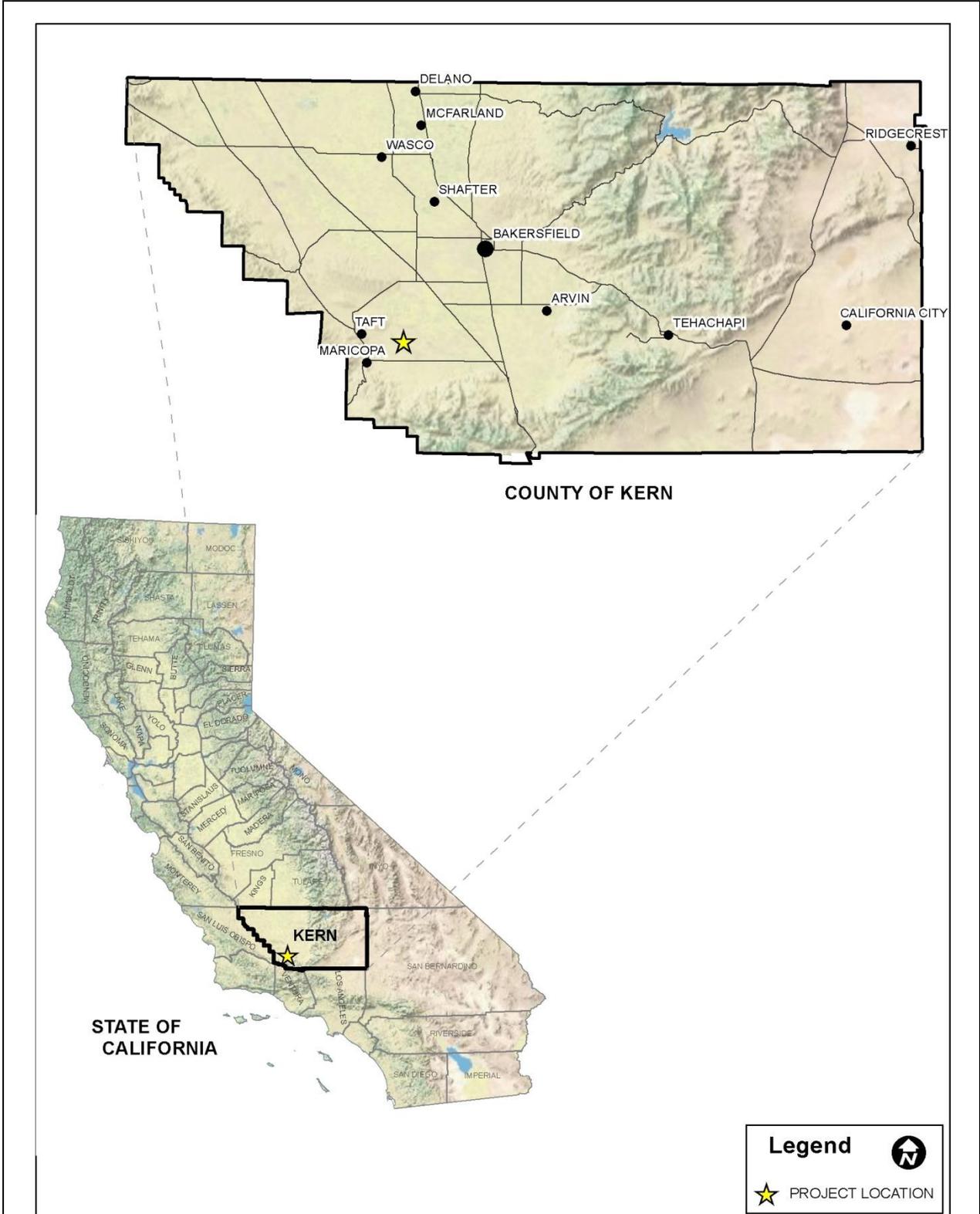
## **1.1 Background**

The Maricopa Sun Solar Complex is located in southwestern Kern County (Figure 1) and will result in the creation of three different land types (Figure 2): Solar Sites, which will include the photovoltaic panels and associated infrastructure; Movement Corridors, which are areas designed to facilitate wildlife movement around the Solar Sites; and Conservation Sites, which will be permanently conserved and managed as wildlife habitat, concurrent with the development of the Solar Sites (all land types collectively called Project). The Project will be phased and is anticipated to take approximately 10-15 years to reach full build-out. The solar production phase of the Project is anticipated to last approximately 35 years. This LTHMP and the MSHCP (Maricopa Sun, LLC Habitat Conservation Plan 2014) associated with the Project is being developed for incidental take coverage for San Joaquin kit fox (*Vulpes macrotis mutica*), Tipton kangaroo rat (*Dipodomys nitratooides*), Nelson's antelope squirrel (*Ammospermophilus nelsoni*), western burrowing owl (*Athene cunicularia*), and blunt-nosed leopard lizard (*Gambelia sila*)(collectively, "Covered Species").

Maricopa Sun, LLC (Project Administrator) is the Permittee for the Project and will maintain an ongoing administrative role in all phases and aspects of the Project, including ongoing habitat management for the Conservation Sites. Any transfer of ownership or administrative obligations of the Conservation Sites will be approved in writing by the United States Fish and Wildlife Service (USFWS).

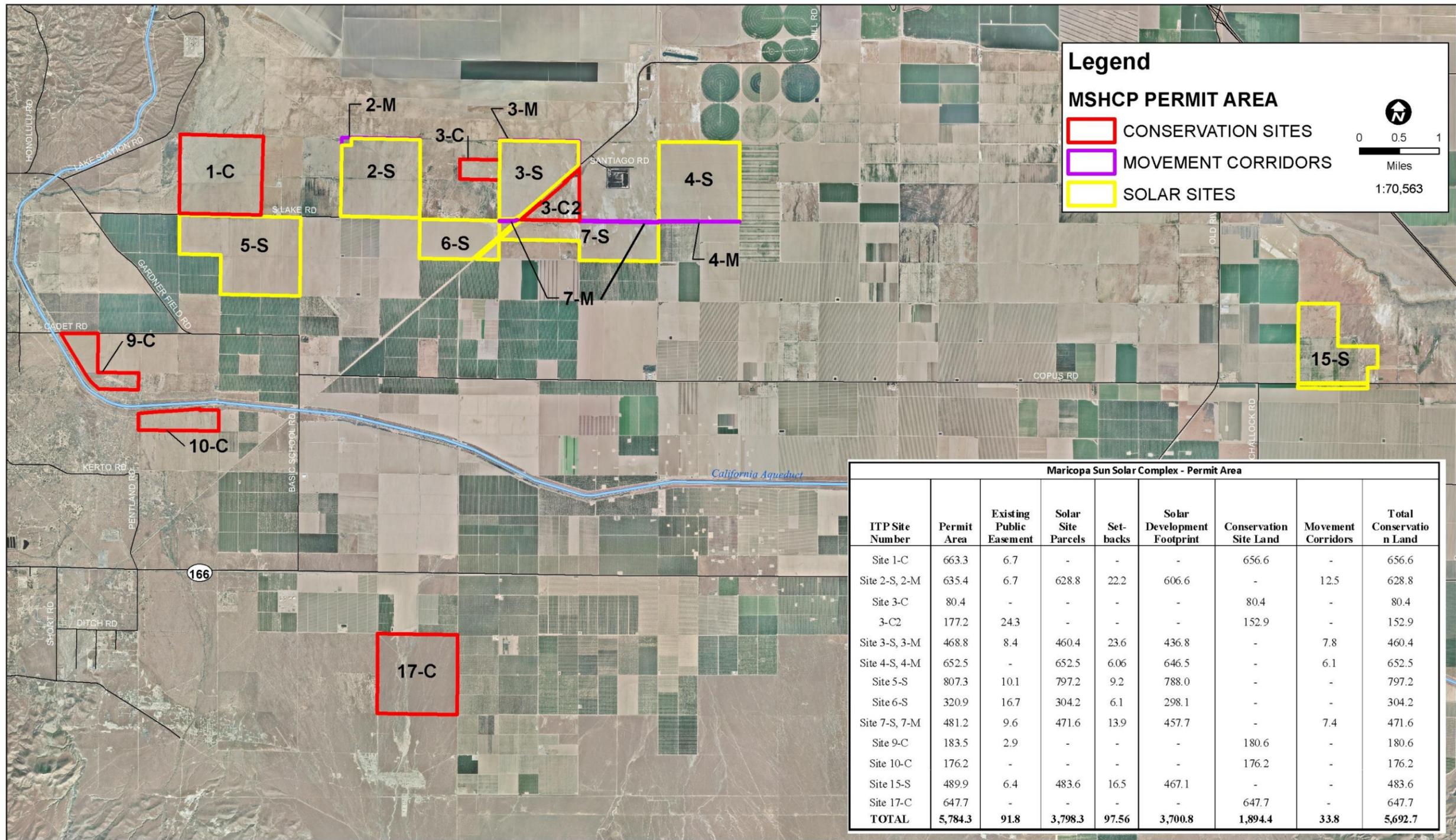
## **1.2 Scope and Purpose**

The purpose of this LTHMP is to ensure that the Conservation Sites are managed, monitored and maintained in perpetuity. This LTHMP establishes objectives, priorities and tasks to monitor, manage, maintain, and report upon the Covered Species and habitats on the Conservation Sites. The Project will be phased; thus, various ecological management activities may begin and end at different times throughout the life of the Project. The LTHMP differs from the Interim Habitat Management Plan (IHMP) in that the LTHMP describes activities that will commence with the recordation of the Conservation Easement on a particular property, will be limited to the Conservation Sites, and will continue on in perpetuity, whereas the IHMP will commence with the development of a Solar Site, will have activities on all three land types (Solar Sites, Movement Corridors, and Conservation Sites; individual parcels within the Permit Area without respect to land types are Sites), and will last for the duration of the Project/MSHCP (Table 1). The purpose of having two plans that are run concurrently is to account for the temporary enhancement actions and increased studies associated with the MSHCP, and at the same time describe the mitigation actions that will continue in perpetuity on the Conservation Sites. This also provides for a distinction in funding, where IHMP activities will be funded directly or indirectly by the Project Administrator and LTHMP activities will be paid for by the interest generated from the funded endowment account.



**REGIONAL LOCATION OF MARICOPA SUN  
SOLAR COMPLEX PROJECT AREA,  
KERN COUNTY, CALIFORNIA**

**Figure  
1**



**Maricopa Sun Solar Complex - Permit Area**

ITP Site Number	Permit Area	Existing Public Easement	Solar Site Parcels	Set-backs	Solar Development Footprint	Conservation Site Land	Movement Corridors	Total Conservation Land
Site 1-C	663.3	6.7	-	-	-	656.6	-	656.6
Site 2-S, 2-M	635.4	6.7	628.8	22.2	606.6	-	12.5	628.8
Site 3-C	80.4	-	-	-	-	80.4	-	80.4
3-C2	177.2	24.3	-	-	-	152.9	-	152.9
Site 3-S, 3-M	468.8	8.4	460.4	23.6	436.8	-	7.8	460.4
Site 4-S, 4-M	652.5	-	652.5	6.06	646.5	-	6.1	652.5
Site 5-S	807.3	10.1	797.2	9.2	788.0	-	-	797.2
Site 6-S	320.9	16.7	304.2	6.1	298.1	-	-	304.2
Site 7-S, 7-M	481.2	9.6	471.6	13.9	457.7	-	7.4	471.6
Site 9-C	183.5	2.9	-	-	-	180.6	-	180.6
Site 10-C	176.2	-	-	-	-	176.2	-	176.2
Site 15-S	489.9	6.4	483.6	16.5	467.1	-	-	483.6
Site 17-C	647.7	-	-	-	-	647.7	-	647.7
<b>TOTAL</b>	<b>5,784.3</b>	<b>91.8</b>	<b>3,798.3</b>	<b>97.56</b>	<b>3,700.8</b>	<b>1,894.4</b>	<b>33.8</b>	<b>5,692.7</b>

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**SITE PLAN**  
**MARICOPA SUN SOLAR COMPLEX, KERN COUNTY, CALIFORNIA**

Figure  
2

**Table 1  
Management Plan Comparison**

	<b>Interim Habitat Management Activities</b>	<b>Long-term Habitat Management Activities</b>
Starting Action	Upon development of Solar Site	Upon recordation of Conservation Easement on Conservation Sites
Duration	35 years/Permitted life of Project	Perpetuity
Land Types	Solar Sites, Movement Corridors, Conservation Sites	Conservation Sites (will cover all sites following decommissioning of Solar Sites)

The IHMP and the LTHMP will be implemented conjunctively and thus have management activities that overlap (e.g., annual reporting, trash removal, species monitoring). For activities where the IHMP and LTHMP overlap, the activity will be paid for initially via the funding of the IHMP. Following the completion of overlapping activities, the Project Administrator may bill the endowment associated with the LTHMP (assuming that the endowment has the funds accumulated and available) to recover the cost of the overlapping activities. This LTHMP is a binding and enforceable instrument, implemented by the Conservation Easement covering the Conservation Sites.

### **1.3 Phasing**

The Project is anticipated to be constructed over the course of the next 10-15 years as market demands and interest dictate (additional details regarding Project Phasing can be found in Chapter 8 of the MSHCP 2014). The construction of solar facilities on the Solar Sites precipitates the conservation of a proportionate amount of the Conservation Sites and the designation of Movement Corridors, where applicable. The Project has an anticipated 35-year lifespan (Interim Period), at which point the Solar Sites will be decommissioned and the solar facilities removed. The future development of the Solar Sites will be limited by a “Springing” Conservation Easement that will be in effect following the conclusion of the term of the MSHCP. The idea of a “springing conservation easement” is that the lands intended for conservation will be managed for another purpose (as Solar Sites) during an initial timeframe (i.e., the Interim Period) and then, once the Interim Period is complete (following decommissioning), will “spring” into effect as conservation lands under the Conservation Easement. Following decommissioning, the Solar Sites will be protected and managed for Covered Species and become subject to the LTHMP. Any capital ecological improvements required for the Solar Sites, as the decommissioned Solar Sites are transitioned to management via the LTHMP, will be paid for via the IHMP.

## **2.0 PROJECT DESCRIPTION**

### **2.1 Geography, Topography, Climate**

The Permit Area is located approximately five miles east of the City of Taft in an unincorporated portion of southwestern Kern County, generally along South Lake Road and Old River Road, east of Gardner Field Road. The Permit Area is made up of multiple, non-contiguous parcels

totaling 5,784.3 acres. Three of the Conservation Sites are located approximately 2-5 miles south of South Lake Road, where the majority of the Sites are located.

The Permit Area lies just north of the Transverse Ranges, near the base of the San Emigdio Mountains, east of the Temblor Range and south of the historic southern shore of Buena Vista Lake. The Permit Area lands are level, consisting predominantly of disked, fallowed agricultural fields, levees, berms and roadways, with some Conservation Sites being ruderal land or naturalized/native habitat. Elevations within the Permit Area range from approximately 320 feet above mean sea level (AMSL) to the east to 900 feet AMSL to the south. Low undulating relief remains on parcels within the Permit Area that are disked, but they have not been laser leveled nor do they retain their natural topography.

The Permit Area has a Mediterranean climate, with cool wet winters and hot dry summers. The average high temperatures are 48.5 degrees Fahrenheit in the winter and 94.8 degrees Fahrenheit in the summer. The average annual precipitation is 6.32 inches, falling predominantly as rain. The prevailing wind is from the west-northwest, with highest wind speeds in April and May, averaging 7.7 miles per hour (USDA, 2009).

## **2.2 Surrounding Land Use**

Lands adjacent to the Permit Area consist predominantly of active agricultural cultivation, including permanent tree crops (e.g., almonds, cherries), row and field crops (e.g., carrots, alfalfa), actively disked fallowed ground, and uncultivated grasslands used for grazing. The uncultivated grazing ground consists of natural or naturalized grasslands habitats, and in some areas provides connectivity to the Buena Vista Hills to the west and San Emigdio Mountains to the south. The grasslands to the west and south also are used for oil production and are associated with the Midway Sunset Oil Field and the Naval Petroleum Reserve.

## **2.3 Soils**

The soils on the Permit Area are highly variable, consisting of 9 different soil types (see Table 2).

## **2.4 Hydrology**

The only significant active hydrologic feature near the Permit Area is the Kern River, about 11 miles to the north. Several smaller blue-line streams flow out of the San Emigdio Mountains to the south and the Transverse Range to the west, all terminating at Buena Vista Lake. Portions of the Permit Area are also mapped by the Federal Emergency Management Agency as being within the 100-year floodplain. Santiago Creek, a named blue-line feature, flows through Conservation Site 17-C, and several other unnamed blue-line features are mapped throughout the Permit Area. Santiago Creek is a likely, though unconfirmed, "Water of the U.S" as defined by the Clean Water Act. The only verified wetlands or waters that occur on the Permit Area that are under federal authority are a 2.55-acre wetland area located in the extreme northwest corner of Solar Site 2-S, and a Water of the U.S. occurring on Conservation Site 1-C. The remaining

hydrologic features in the vicinity of the Permit Area consist of man-made water conveyance facilities, such as irrigation ditches, canals and the California Aqueduct.

**Table 2**  
**Soil Types Occurring Throughout the Maricopa Sun Solar Complex**

<b>Location</b>	<b>Soil Type Present</b>
<b>Site 1-C</b>	132-Cerini loam (0-2 percent slopes), 133-Calflax loam (0-1 percent slopes), 151- Excelsior fine sandy loam (saline-sodic, 0-1 percent slopes), 153-Tupman gravelly sandy loam (0-2 percent slopes), 160-Fages clay (0-1 percent slopes), and 352-Posochanet-Posochanet (partially reclaimed association, 0-1 percent slopes)
<b>Site 2-S, 2-M</b>	133-Calflax loam (0-1 percent slopes) and 151- Excelsior fine sandy loam (saline-sodic, 0-1 percent slopes)
<b>Site 3-S, 3-M</b>	133-Calflax loam (0-1 percent slopes), 160-Fages clay (0-1 percent slopes)
<b>Site 3-C</b>	133-Calflax loam (0-1 percent slopes), 160-Fages clay (0-1 percent slopes)
<b>Site 3-C2</b>	133-Calflax loam (0-1 percent slopes), 151- Excelsior fine sandy loam (saline-sodic, 0-1 percent slopes)
<b>Site 4-S, 4-M</b>	133-Calflax loam (0-1 percent slopes) and 350-Posochanet silt loam (saline-sodic, 0-1 percent slopes)
<b>Site 5-S</b>	132-Cerini loam (0-2 percent slopes), 133-Calflax loam (0-1 percent slopes), 150-Excelsior sandy loam (0-2 percent slopes), 151- Excelsior fine sandy loam (saline-sodic, 0-1 percent slopes), 152-Excelsior loam (0-2 percent slopes)
<b>Site 6-S</b>	132-Cerini loam (0-2 percent slopes), 133-Calflax loam (0-1 percent slopes), and 152-Excelsior loam (0-2 percent slopes)
<b>Site 7-S, 7-M</b>	133-Calflax loam (0-1 percent slopes), 151-Excelsior fine sandy loam (saline-sodic, 0-1 percent slopes)
<b>Site 9-C</b>	132-Cerini loam (0-2 percent slopes), 133-Calflax loam (0-1 percent slopes), and 150-Excelsior sandy loam (0-2 percent slopes)
<b>Site 10-C</b>	132/134-Cerini loam (0-2 percent slopes/2-5 percent slopes), and 152-Excelsior loam (0-2 percent slopes)
<b>Site 15-S</b>	133-Calflax loam (0-1 percent slopes), 151-Excelsior fine sandy loam (saline-sodic; 0-2 percent slopes), and 160-Fages clay (0-1 percent slopes)
<b>Site 17-C</b>	134-Cerini loam (0-2 percent slopes) and 192-Guajarral-Klipstein complex (2 -5 percent slopes)

### **3.0 HABITATS AND SPECIES**

#### **3.1 Habitats**

The habitat type on the Permit Area consists predominantly of disked, fallowed farmland. All of the Solar Sites and Movement Corridors and some of the Conservation Sites (1-C, 3-C and a portion of 9-C) are disked regularly to maintain the Sites free of vegetation. Conservation Site 17-C and an approximately 80 acre portion of Conservation Site 9-C appear to be un-disked, retain their natural topography and have vegetation consisting of a mixed non-native annual

grassland and saltbush scrub mosaic consistent with other surrounding natural areas. Conservation Site 3-C2 was disked approximately 6 years ago and appears to be in the process of returning to an annual grassland.

The disked portions of the Permit Area provide very little habitat value for plants and wildlife. Regular disking prevents the colonization of plants and animals, and because the sites remain fallow, there is no wildlife benefit from the production of agricultural crops. These disked fields only provide open space which allows for movement of wildlife across the fields and marginal foraging opportunities when adjacent to parcels that contain natural communities.

The un-disked Conservation Sites (both intact and recovering) provide significant habitat value and connectivity to local plant and wildlife communities. Much of the surrounding area, as well as the broader San Joaquin Valley, has been converted to agricultural production or urban development. This development has reduced the acreage of native habitat and reduced the populations of native plants and wildlife. These un-disked Conservation Sites, as well as the other Conservation Sites following the cessation of disking, provide critical refugia for native plants and wildlife and contribute to the persistence of these species. Additional detail on the habitat types and species found on and adjacent to the Permit Area can be found in Chapter 3 and Appendix G of the MSHCP.

### **3.2 Conservation and Endangered Species Recovery Value**

The Permit Area, upon construction, will immediately begin to contribute to the recovery of species. Concurrent with the start of development, a proportional amount of the Conservation Sites will be protected with Conservation Easements, have endowments to ensure long-term management, and will be monitored and managed for their habitat values. Further, the Solar Sites will be managed in a way that does not preclude wildlife and endangered species colonization. The Solar Sites, while in energy production, will likely provide some habitat value to the Covered Species, but they are anticipated to be colonized by plant and wildlife species, which will result in an increase in locally available habitat over the previously disked condition. Upon decommissioning, the Solar Sites will have the energy production facilities and infrastructure removed, and the Solar Sites and Movement Corridors will become Conservation Sites and managed for their habitat values.

The various land types within the Permit Area will contribute to the recovery of species to varying degrees during the energy production life of the Project. The Conservation Sites (and the remainder of the Project following decommissioning) contribute to the following recovery priorities and tasks as outlined in the Recovery Plan for Upland Species of the San Joaquin Valley, California (USFWS 1998):

1. Recovery Task 2.1.4 (Priority 1) – Protection of large blocks of land in Western Kern County;
2. Recovery Task 3.2.22 (Priority 3) – Multispecies animal surveys for upland vertebrates, southwestern Valley edge;

3. Recovery Task 4.26 (Priority 1) – Monitoring/Studies on dispersal, movement, diet, reproduction, use of agricultural fields, use of artificial dens for San Joaquin kit fox;
4. Recovery Task 5.3.8 (Priority 2) – Protection of linkage areas around the San Joaquin Valley edge; and
5. Recovery Task 6 (Priority 3) – Apply adaptive management to protected areas.

The Project will contribute to the large matrix of protected land that already exists in western Kern County, and will add to the growing corridor of habitat that connects the Wind Wolves Preserve with the Naval Petroleum Reserve. The Project will also contribute to the creation of an east-west corridor of protected land that will connect the historic southern lake shores of Buena Vista and Kern Lakes.

### 3.3 Sensitive Species and Vegetation Communities

Western Kern County is a well-known and important area for sensitive San Joaquin Valley endemic species. While most of the Permit Area is disked and does not support any species, many sensitive species and sensitive vegetation communities are known from the area (see Table 3).

**Table 3**  
**Sensitive Species and Vegetation Communities**

Scientific Name	Common Name	Status
<b>Sensitive vegetative communities</b>		
Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	Protected under CEQA
Great Valley Mesquite Scrub	Great Valley Mesquite Scrub	Protected under CEQA
Valley Sacaton Grassland	Valley Sacaton Grassland	Protected under CEQA
Valley Saltbush Scrub	Valley Saltbush Scrub	Protected under CEQA
Valley Sink Scrub	Valley Sink Scrub	Protected under CEQA
<b>Plants</b>		
<i>Allium howellii</i> var. <i>clokeyi</i>	Mt. Pinos onion	1B.3
<i>Astragalus hornii</i> var. <i>hornii</i>	Horn's milk-vetch	1B.1
<i>Atriplex cordulata</i>	Heartscale	1B.2
<i>Atriplex tularensis</i>	Bakersfield smallscale	CE, 1B.1
<i>Atriplex coronata</i> var. <i>vallicola</i>	Lost Hills crownscale	1B.2
California ( <i>Erodium</i> ) <i>macrophyllum</i>	round-leaved filaree	1B.1
<i>Caulanthus californicus</i> ( <i>Stanfordia californica</i> )	California jewel-flower	FE, CE, 1B.1
<i>Caulanthus coulteri</i> var. <i>lemmonii</i>	Lemmon's jewelflower	1B.2
<i>Cirsium crassicaule</i>	slough thistle	1B.1
<i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	Hispid bird's beak	1B.1
<i>Delphinium recurvatum</i>	recurved larkspur	1B.2
<i>Eremalche kernensis</i>	Kern mallow	FE, 1B.1
<i>Eriastrum hooveri</i>	Hoover's eriastrum	4.2
<i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>	Tejon poppy	1B.1
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	1B.1
<i>Layia heterotricha</i>	Pale-yellow layia	1B.1
<i>Layia leucopappa</i>	Comanche Point layia	1B.1
<i>Monardella linoides</i> ssp. <i>oblonga</i>	Tehachapi monardella	1B.3
<i>Monolopia congdonii</i>	San Joaquin woollythreads	FE, 1B.2
<i>Stylocline citroleum</i>	oil neststraw	1B.1

**Table 3**  
**Sensitive Species and Vegetation Communities (Continued)**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Status</b>
<b>Invertebrates</b>		
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	FT
<i>Euproserpinus euterpe</i>	Kern primrose sphinx moth	FT
<b>Fishes</b>		
<i>Hypomesus transpacificus</i>	Delta smelt	FT, CT
<b>Amphibians</b>		
<i>Rana aurora draytonii</i>	California red-legged frog	FT
<i>Spea hammondi</i>	western spadefoot	CSC
<b>Reptiles</b>		
<i>Actinemys marmorata pallida</i>	western pond turtle	CSC
<i>Anniella pulchra pulchra</i>	silvery legless lizard	CSC
<i>Gambelia sila</i>	blunt-nosed leopard lizard	CE, FE, CDFW fully protected
<i>Masticophis flagellum ruddocki</i>	San Joaquin whipsnake	CSC
<i>Phrynosoma blainvillii</i>	California horned lizard	CSC
<i>Thamnophis gigas</i>	giant garter snake	FT, CT
<b>Birds</b>		
<i>Agelaius tricolor</i>	tricolored blackbird	CSC
<i>Athene cunicularia</i>	western burrowing owl	CSC
<i>Buteo swainsoni</i>	Swainson's hawk	CSC
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT
<i>Charadrius montanus</i>	mountain plover	CSC
<i>Circus cayaneus</i>	Northern harrier	CSC
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	CE
<i>Dendrocygna bicolor</i>	fulvous whistling-duck	CSC
<i>Elanus leucurus</i>	white-tailed kite	CDFW fully protected
<i>Eremophila alpestris actia</i>	California horned lark	CDFW watch list
<i>Falco mexicanus</i>	prairie falcon	CDFW watch list
<i>Gymnogyps californianus</i>	California condor	FE, CE
<i>Lanius ludovicianus</i>	Loggerhead shrike	CDFW watch list
<i>Plegadis chihi</i>	white-faced ibis	CDFW watch list
<i>Toxostoma lecontei</i>	Le Conte's thrasher	CSC
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird	CSC
<b>Mammals</b>		
<i>Ammospermophilus nelsoni</i>	Nelson's antelope squirrel	CT
<i>Dipodomys ingens</i>	giant kangaroo rat	FE, CE
<i>Dipodomys nitratoides brevinasus</i>	short-nosed kangaroo rat	CSC
<i>Dipodomys nitratoides nitratoides</i>	Tipton kangaroo rat	FE, CE
<i>Eumops perotis californicus</i>	western mastiff bat	CSC
<i>Onychomys torridus tularensis</i>	Tulare grasshopper mouse	CSC
<i>Perognathus inornatus inornatus</i>	San Joaquin pocket mouse	CSC, BLMS
<i>Sorex ornatus relictus</i>	Buena Vista Lake shrew	FE
<i>Taxidea taxus</i>	American badger	CSC
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	FE, CT

**Status Definitions**

FE	Federally Endangered
CE	California Endangered
1B.1	California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and Elsewhere; Seriously Endangered in California
1B.2	California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and Elsewhere; Fairly Endangered in California.

- 1B.3 California Native Plant Society List 1B Species-Plants Categorized as Rare, Threatened, or Endangered in California and Elsewhere;  
Not Very Endangered in California
- 4.2. Plants of limited distribution - Watch list, Fairly endangered in California (20-80% occurrences threatened)

## **4.0 MANAGEMENT AND MONITORING**

This section of the LTHMP describes the ecological management, monitoring and adaptive management activities that are anticipated to be conducted on the Conservation Sites. The LTHMP will be administered by the Project Administrator as outlined in this plan, but actual management activities may be performed by a separate management entity as authorized by the USFWS. Funding for the implementation of this LTHMP will be provided by the Maricopa Sun Solar Complex Endowment.

### **4.1 Goals and Objectives**

The primary biological goal of this LTHMP and of the broader MSHCP (Maricopa Sun, LLC MSHCP 2014, Chapter 5), is to preserve the species and habitats for which the MSHCP has been prepared.

This goal is realized by accomplishing the following objectives:

- Maintaining an ability of San Joaquin kit fox (SJKF) to disperse through the Permit Area and within the region;
- Preserving existing populations of the Tipton kangaroo rat (TKR) within the Permit Area, and providing habitat for the TKR within the Permit Area;
- Preserving existing populations of the Nelson's antelope squirrel (NAS) within the Permit Area, and providing habitat for the NAS within the Permit Area;
- Preserving existing populations of the western burrowing owl (WEBO) within the Permit Area, and providing habitat for the WEBO within the Permit Area;
- Providing habitat for the blunt-nosed leopard lizard (BNLL) within the Permit Area.

### **4.2 Management and Personnel**

The Project Administrator, and subsequent Project Administrators upon transfer, shall administer this LTHMP, managing and monitoring the Conservation Sites in perpetuity to preserve the habitat and conservation values in accordance with the Conservation Easements and the LTHMP. The specific tasks outlined in this LTHMP will be implemented by the Project Administrator or Qualified Personnel and are described in Section 3, below.

When appropriate, the Project Administrator shall retain professional biologists, grazing managers, machinery operators or other specialists to conduct specialized tasks (Qualified Personnel). The Monitoring Biologist is one of the Qualified Personnel, and shall be familiar with California flora and fauna and shall have knowledge regarding the ecology of the San

Joaquin Valley and the habitats of the Conservation Sites and the region. Qualified Personnel shall have a valid Section 10(a)(1)(a) permit for the appropriate species, when tasks require activities that would normally require such a permit (e.g., trapping for Tipton kangaroo rat). The Project Administrator may also serve as Qualified Personnel when qualified and where appropriate.

General administration of this LTHMP is the responsibility of the Project Administrator and implementation of this LTHMP is the responsibility of the Project Administrator. The Project Administrator will work with the Monitoring Biologist and other Qualified Personnel to ensure that all tasks are completed. The Project Administrator, Monitoring Biologist, and other Qualified Personnel will work together as a team to implement the LTHMP by exchanging information, problem solving and generally having a proactive relationship. If the Project Administrator changes, the incoming and outgoing personnel will tour the Conservation Sites together, and the former will inform the latter of trends and, problem areas, review past annual reports, and identify any administrative issues.

Duties of the Monitoring Biologist may include, but are not limited to:

- Conducting biological surveys, collecting data, preparing reports required by this LTHMP;
- Evaluating conditions on the Conservation Sites and recommending actions to the Project Administrator;
- Identifying and reporting opportunities and needs for adaptive management actions to the Project Administrator;
- Conducting thatch/exotic plan management activities when necessary, with the Project Administrator.

Other Qualified Personnel may be responsible for tasks such as:

- Implementing vegetation management activities like grazing, chemical control application, or mechanical removal; and
- Performing specialized studies on implementing adaptive management actions.

### **4.3 Biological Resources**

The overall goal of this LTHMP is to foster the long-term viability of the habitat values of the Conservation Sites and the Covered Species that use the Conservation Sites. Routine monitoring and maintenance tasks are intended to assure the viability of the Conservation Sites in perpetuity, and provide the information necessary to implement adaptive management activities.

The long-term management of the Conservation Sites' biological resources will include regular examinations of the Conservation Sites, monitoring of selected characteristics to determine stability of habitats, and identifying ongoing trends and adaptive management opportunities. The

Qualified Personnel, including the Monitoring Biologist, selected to perform these monitoring responsibilities, will have the knowledge, training, and experience to accomplish these tasks.

The Project Administrator shall implement the following:

#### **4.3.1 BIOLOGICAL EXAMINATIONS**

Regular Biological Examinations will help ensure the integrity of the habitat on the Conservation Sites. The goal of the Biological Examination is to regularly observe the habitats of the Conservation Sites and to qualitatively track trends in those habitats.

##### **Objective:**

1. Perform Biological Examinations of the Conservation Sites.

##### **Task:**

1. Biological Examinations shall occur twice annually (once in the spring and once in the fall) by Qualified Personnel, and will focus on an evaluation of the habitats on the Conservation Sites. The entire perimeters of the Conservation Sites will be observed, and meandering transects will be conducted through the entirety of the Conservation Sites to gather qualitative information. This information will be used to track changes in habitat, any observations or evidence of Covered Species, important vegetation changes, or other observations relevant to management of the Conservation Sites.
2. Two permanent Photo-Points will be established on each Conservation Site. The Photo-Points will be located at points that provide accurate general representations of conditions across the Conservation Site. Photographs will be taken in the four cardinal directions from each Photo-Point.
3. All observations will be recorded and included in the annual report.

#### **4.3.2 VEGETATION EXAMINATIONS**

Vegetation Examinations on the Conservation Sites will consist of vegetation height measurements to determine Residual Dry Matter (RDM). The goal of the Vegetation Examination is to measure and track the effectiveness of the vegetation management activities as described in Section 4.3.3, below, so that the Conservation Sites continue to provide habitat for the Covered Species. The Covered Species generally prefer landscapes with low vegetation and scattered shrubs; thus, the habitats on the Conservation Sites will be managed as such for the benefit of the Covered Species.

**Objective:**

1. Perform Vegetation Examinations of the Conservation Sites.

**Task:**

1. Vegetation Examinations shall occur twice annually (once in the spring and once in the fall) by Qualified Personnel. Vegetation Examination points will be collocated with the permanent Photo-Points described in Section 3.1.1, above. Vegetation height will be measured at 10 random points within a 20-foot radius of the Photo-Point. An average vegetation height will be calculated for each point, which will be used to estimate RDM (Bartolome et al. 2002).

**4.3.2.1 Invasive Exotic Pest Species Management**

Plants native to the Conservation Sites will be defined as those plants believed by the scientific community to have been present in Kern County and/or the San Joaquin Valley prior to European settlement. The Jepson Manual (Hickman 1993 and following revisions) may generally be used as a reference in determining if a plant is native or non-native to the San Joaquin Valley sub-region of the Great Valley. Many plant species that are common in California annual grasslands are non-native, but are considered “naturalized” or do not threaten the habitat values of the Conservation Sites. Invasive exotic pest species are plants that are not native, have a tendency to out-compete native vegetation, and negatively affect the habitat values of the Conservation Sites. The California Invasive Plant Council ([www.CAL-IPC.org](http://www.CAL-IPC.org)) maintains a list of invasive exotic plant species that should be consulted in determining if a plant is a potential management concern. Plants that have a “red-alert” or “high” designation shall be treated as invasive exotic pest species.

**Objective:**

1. Monitor and maintain control over invasive exotic pest species that diminish habitat quality for the Covered Species.

**Task:**

1. The Biological Examination will include a visual estimate of cover of invasive exotic pest plant species or other non-native species invasions. Large patches (approximately 1,000 sq. ft. or greater) of invasive exotic pest plants will be mapped using a GPS, and reported to the Project Administrator. The Project Administrator and Qualified Personnel will evaluate the identified patch, its likelihood of negatively affecting the habitat values of the Conservation Sites, and its ability to be controlled (e.g., control is performed during the appropriate season and life stage).
2. If it is determined that the invasive exotic pest plant can be controlled, the Project Administrator will coordinate and implement the most effective control measures under the supervision of the Monitoring Biologist, which may include mechanical removal, hand removal, chemical removal, prescribed burns, or targeted grazing in a manner that will avoid disturbance to Covered Species. It may be determined that an invasive, exotic pest plant

cannot be controlled that season or year. For instance, when an invasive, exotic pest plant is first identified, it may be determined that it is too late in the season to implement appropriate controls for that species; in which case control measures would need to be postponed to the following season or year. If an invasive is not controlled in a given season or year, a note will be made in the annual report regarding the size of the patch, the species of interest, the location of the patch, and recommendations for future control. This area will be revisited by Qualified Personnel the following year, evaluated based on the recommendations for future control, and then controlled as appropriate. It is anticipated that during the early years of natural revegetation, invasive species will be common and will not be controlled. Invasive species are a typical component of natural restoration and must be allowed to continue for later seral stages to develop without extensive seeding and restoration of native species (DOI 2005).

3. Scattered tamarisk trees are present on some Conservation Sites. Individual trees will be removed at the recommendation and supervision of the Monitoring Biologist of other Qualified Personnel. Removal may require the use of chainsaws and/or other machinery (such as a Bobcat compact track loader).

### **4.3.3 VEGETATION MANAGEMENT**

The primary goal of vegetation management activities is to maintain vegetation, especially herbaceous cover, in a manner that benefits the Covered Species. The Covered Species are most often associated with desert grassland/shrubland habitats that have low topographic relief and sparse shrub cover. Dense or tall vegetation can inhibit the movement of the Covered Species, and can make predator detection and avoidance more difficult (USFWS 1998).

Livestock grazing is anticipated to be the primary means of vegetation management on the Conservation Sites. Moderate to heavy livestock grazing in the winter and spring should result in range conditions that are within target RDM levels (Barry et al. 2006). Livestock are generally anticipated to be applied in the fall, and will begin removing accumulated thatch that may have been left from the previous year. Livestock will remain present throughout the spring growth period to control grasses and forbs. Generally livestock will be removed when target RDM levels are achieved in the spring, but livestock may be left on site later in the year to control exotic invasive weeds or problematic late season summer annuals.

Stocking rates will be determined annually in coordination with the Project Administrator and the grazing tenant. The Conservation Sites may be subdivided into smaller blocks using temporary or permanent fencing to facilitate the distribution of animals or provide for more targeted vegetation management. Supplemental water may also be provided to facilitate uniform vegetation management. All of the numbers and dates in this plan are estimates and intended to be used as guidelines to achieve the goals and objectives. The management of this vegetation is weather dependent, and methods to achieve the targets will be established by the Project Administrator in consultation with the Qualified Personnel and the grazing tenant. In the event that RDM levels are not anticipated to exceed the prescribed thresholds and/or weed management by livestock grazing is determined by the Qualified Personnel to not be required, livestock may not be used. Grazing strategies may evolve with time, and be implemented via

adaptive management as range science and recommendations from Qualified Personnel may dictate. Other vegetation management techniques and tools (e.g., controlled burns, mowing, hand removal) may be used at the recommendation of the Qualified Personnel, upon coordination with and authorization by the USFWS.

**Objective:**

1. Manage vegetation on the Conservation Sites to be 500 to 1,500 lbs./acre of RDM.

**Task:**

1. Vegetation on the Conservation Sites will be maintained at 500 to 1,500 lbs./acre of RDM. Vegetation may occasionally exceed 1,500 lbs./acre following the bolt of vegetative growth that grasslands typically experience in the spring, but grazing and/or other management techniques are anticipated to quickly reduce that vegetation back to below 1,500lbs./acre.

#### **4.3.4 COVERED SPECIES MONITORING**

Regular monitoring of the Covered Species on the Conservation Sites will enable the Project Administrator and other Qualified Personnel to better understand the use of the Conservation Sites by the Covered Species, and make management recommendations and adaptive management changes.

##### **4.3.4.1 San Joaquin Kit Fox**

**Objective:**

1. Monitor the use of the Conservation Sites by SJKF.

**Task:**

1. Once every 3 years, concurrent with the BNLL pedestrian surveys (Section 4.3.4.5, below), incidental observations of evidence of SJKF will be conducted on the Conservation Sites. The surveys are intended to note any evidence of SJKF use of the Conservation Sites, including dens, tracks, latrine sites, etc. All observations of SJKF individuals and sign will be recorded and used to inform priority areas for spotlighting surveys.
2. Spotlighting surveys will be conducted for one night, once each survey season following the pedestrian surveys. The spotlighting surveys will be conducted by driving the perimeter of each Conservation Site (as practicable) and through the Conservation Sites (as necessary), such that the visual coverage of the spotlighting is maximized and is consistent with good professional judgment of the Monitoring Biologist. Prioritization of SJKF survey effort will be directed towards areas where the species' sign was noted during the pedestrian surveys. Except for the duration, spotlighting surveys will follow the methodology described in Appendix 1, Section 1 of the SJKF Survey Protocol (USFWS 1999). All SJKF individuals or sign will be recorded and included in that year's annual report.

#### **4.3.4.2 Tipton Kangaroo Rat**

##### **Objective:**

1. Monitor the use of the Conservation Sites by TKR.

##### **Task:**

1. Once every 3 years, concurrent with the BNLL pedestrian surveys (Section 4.3.4.5, below), incidental observations of evidence of kangaroo rats will be conducted on the Conservation Sites, on those Sites that are within the range of the species. The surveys are intended to note any evidence of kangaroo rat use of the Conservation Sites, including burrows, tracks, scat, etc. All kangaroo rat sign will be recorded and used to inform priority areas for live-trapping.
2. Trapping will be conducted for three nights, once each survey season following the pedestrian surveys. At least one trap line will be monitored per 320 acres of Conservation Site. The number of traps deployed will be dependent upon the number and distribution of burrows present and the patch size of the area occupied. Traps will be deployed according to the best professional judgment of the Monitoring Biologist. Except for the duration, live-trapping will follow the methodology described in Survey Protocol for Determining the Presence of San Joaquin Kangaroo Rats (USFWS 2013). All TKR individuals or sign will be recorded and included in that year's annual report.

#### **4.3.4.3 Nelson's Antelope Squirrel**

##### **Objective:**

1. Monitor the use of the Conservation Sites by NAS.

##### **Task:**

1. Once every 3 years, concurrent with the BNLL pedestrian surveys (Section 4.3.4.5, below), incidental observations of NAS will be conducted on the Conservation Sites. All NAS individuals or presumed sign (e.g., tracks and scat) will be recorded and included in that year's annual report.

#### **4.3.4.4 Western Burrowing Owl**

##### **Objective:**

1. Monitor the use of the Conservation Sites by WEBO.

##### **Task:**

1. Once every 3 years, concurrent with the BNLL pedestrian surveys (Section 4.3.4.5, below), incidental observations of WEBO will be conducted on the Conservation Sites. All WEBO

individuals or presumed sign (e.g., tracks, white wash, prey remains, and pellets) will be recorded and included in that year's annual report.

#### **4.3.4.5 Blunt Nosed Leopard Lizard**

##### **Objective:**

1. Monitor the use of the Conservation Sites by BNLL.

##### **Task:**

1. Once every three years, a single complete visual coverage pedestrian survey for BNLL will be conducted on the Conservation Sites. Surveys will be conducted in the spring/summer, following standard time and temperature constraints (CDFG 2004). The surveys are intended to monitor the use of the Conservation Sites by BNLL. The Conservation Sites also have a low density of shrub vegetation; thus, transects will be walked at 30-meter intervals (approximately 53 transects linear mile). All BNLL individuals or presumed sign will be recorded and included in that year's annual report.

## **4.4 Conservation Site Maintenance**

The long-term maintenance and protection of the Conservation Sites' resources will include annual examinations of the Conservation Sites. Annual examination will involve monitoring of infrastructure (fencing, signage, etc.) to determine and manage threats to the stability of habitats, and to identify ongoing trends and adaptive management opportunities. The Qualified Personnel selected to perform these monitoring responsibilities will have the knowledge, training, and experience to accomplish these responsibilities.

The Project Administrator shall implement the following:

### **4.4.1 GENERAL EXAMINATIONS**

Regular General Examinations will help ensure the integrity of the habitat on the Conservation Sites. The goal of the General Examination is to regularly observe the habitats of the Conservation Sites and to qualitatively track trends in the management of those habitats.

##### **Objective:**

1. Perform General Examinations of the Conservation Sites.

##### **Task:**

1. General Examinations shall occur twice annually (once in the spring and once in the fall) by Qualified Personnel, and will focus on the management of the habitats and infrastructure (fencing, signage, etc.) on the Conservation Sites. All perimeters of the Conservation Sites will be observed, and meandering transects will be conducted through the entirety of the Conservation Sites to gather qualitative information. This information will be used to track any observations or evidence of management concerns or obligations relevant to the

management of the Conservation Sites. All observations will be recorded and included in the annual report.

#### **4.4.2 TRASH AND TRESPASS**

**Objective:**

1. Monitor and Repair Sources of Trash and Trespass.

**Task:**

1. During each General Examination, Qualified Personnel shall record occurrences of trash and/or trespass. Records shall include record type, location, and management/mitigation recommendations to avoid, minimize, or rectify trash and/or trespass impact. Any observations of trash or trespass that cannot be removed or repaired by the observer will be noted and reported to the Project Administrator.
2. At least once yearly, Qualified Personnel shall collect and remove trash and repair and rectify vandalism and/or trespass impact to the maximum degree practicable to protect the conservation values of the Project.

#### **4.4.3 FIRE HAZARD REDUCTION**

**Objective:**

1. Reduce the potential for the Conservation Sites to be fire hazards.

**Task:**

1. If at any time, conditions at the Conservation Sites become a fire hazard (as determined or requested by the Kern County Fire Department) the Project Administrator will work with the USFWS and the local fire authorities to determine the best method to reduce the fire risk.

#### **4.4.4 FENCES, GATES AND SIGNS**

Initial fencing and signage will be installed on the Conservation Sites per the IHMP. Maintenance of the fencing and signage will be required in this LTHMP.

**Objective:**

1. Maintain fencing and signage to discourage unauthorized access.

**Task:**

1. A minimum of three-strand barbed wire fencing shall be installed around the perimeter of each Conservation Site, with the bottom wire being barbless to contribute to the permeability of the fence for larger animals like the SJKF. At least one gate will be maintained on each

Conservation Site to provide access for monitoring, maintenance, and emergency personnel. Per the IHMP, upon decommissioning of the Solar Sites, the security fence will be removed and replaced with fencing as described above for Conservation Sites, which will then be monitored according to this LTHMP.

Signage that discourages public access and informs the public of the protection of the habitat values of the Conservation Sites will be maintained around the perimeter of the Conservation Sites at a rate of no less than 3 signs per mile. Signs will be maintained on the perimeter fencing to the maximum degree practicable, but may be installed on free-standing posts where appropriate.

2. Perimeter fencing, signage and gates will be inspected at least twice annually during the General Examinations, but fencing is anticipated to be casually observed during many of the associated LTHMP activities. All issues related to the integrity of the fencing, signage or gates shall be immediately reported to the Project Administrator and Project Administrator shall make repairs as soon as practicable. The Project Administrator is responsible for the repair, maintenance and replacement of all fencing, as well as ensuring that all gates remain locked to prevent unauthorized access. Additional temporary or permanent fencing may be added for maintenance purposes, grazing control, adaptive management activities, etc. Plans for changes in fencing alignment or additional fencing in the coming year will be noted in the prior year's annual report or following discussion with the USFWS.

Access to the Conservation Sites will be prohibited, except for activities described in this LTHMP, the IHMP, and the MSHCP. Access to the Conservation Sites in emergency or law-enforcement situations by medical, fire or law enforcement personnel and vehicles is allowed. Except in cases where the USFWS determines that immediate entry is required to prevent, terminate or mitigate a violation of this LTHMP, access to the Conservation Sites will be provided to the USFWS with 48 hours of notice.

#### **4.4.5 EROSION**

##### **Objective:**

1. Reduce erosion that negatively affects habitat values.

##### **Task:**

1. If it is determined during the General Examination that drainage is causing any erosion or other adverse effects that threaten the habitat value of the Conservation Sites, the Project Administrator will be notified and erosion control measures will be implemented.

#### **4.5 Decommissioning**

Decommissioning of the Solar Sites will occur within 35 years of permit issuance, and will involve the removal of solar panels, removal of other power generation infrastructure, the replacement of security fencing with barbed wire fencing for Conservation Sites, etc. Following

the completion of the decommissioning, the Solar Sites and the Movement Corridors will become Conservation Sites, will be managed for Covered Species. The funding necessary for the management of the Solar Sites and Movement Corridors under the LTHMP will come from a supplemental endowment contribution that was placed with the Endowment Holder prior to construction and allowed to grow with compounding interest. This supplemental endowment funding will be added to the endowment following the end of the MSHCP term.

**Objective:**

1. Manage the Solar Sites and Movement Corridors as Conservation Sites following decommissioning.

**Task:**

1. Following decommissioning, all habitat management activities associated with the IHMP will be discontinued and the LTHMP will be in-force on the Project and funded by the Endowment Account.

#### **4.6 Adaptive Management**

Adaptive management is defined as the use of new information gathered from a monitoring program or from other sources to adjust management strategies and practices to improve conservation of a Covered Species (California Fish and Game Code 2805(a)). Adaptive management is important in land management, because it allows flexibility in managing the Conservation Sites to achieve the plan goals and objectives. The management tasks identified in this LTHMP are based on the current understanding of the Conservation Sites. As the Conservation Sites are monitored over time, new data will become available that may trigger changes to the management tasks to improve habitat quality.

The six main steps in adaptive management are:

1. Identification of the problem or management goal;
2. Design of the management action or implementation task(s);
3. Implementation;
4. Monitoring of the results;
5. Evaluation of the results relative to the desired management goals; and
6. Adjustment of management actions.

**Objective:**

1. Maintain flexibility to modify management strategies and methods to ensure that the protected habitats are maintained in good condition such that they will continue to support the Covered Species and habitats in perpetuity.

**Task:**

1. The Project Administrator shall consider new technologies and practices to achieve the goal: to preserve the species and habitats for which the MSHCP has been prepared. Adaptation of the methods described in this LTHMP must be agreed upon by the Project Administrator and the USFWS. Techniques to address management of new conditions, if not addressed in this LTHMP, may be implemented by the Project Administrator upon review and written approval by the USFWS.

**4.7 Conservation Easement Monitoring**

The Conservation Easement Holder will conduct one monitoring visit each year to document compliance with the terms of the Conservation Easement. A report will be prepared and submitted to the USFWS annually within 30 days of the end of each calendar year. If the Conservation Sites are observed to not be in compliance with the terms of the Conservation Easement, the Conservation Easement Holder shall immediately contact the Project Administrator for remedy and the non-compliance and remedy will be included in that year's Conservation Easement Holder report. If the non-compliance is not resolved to the satisfaction of the Conservation Easement Holder, the Conservation Easement Holder will notify the USFWS.

**4.8 Reporting and Administration****4.8.1 REPORTING**

The Project Administrator, in conjunction with the Qualified Personnel, will be responsible for preparing and submitting an annual report to the USFWS with a copy to the Conservation Easement Holder within 30 days of the end of each calendar year. At a minimum, each annual report will include the following:

- A summary and map of all Conservation Sites;
- A list and map of all Conservation Sites that were protected with Conservation Easements and the corresponding funding contributed to the Endowment Account;
- A description of all maintenance and management activities completed during the year of the report;
- A description of all maintenance and management activities anticipated to be completed in the next year;
- Photographs documenting the habitats of the Conservation Sites as well as any dens and perching posts;
- A summary of all findings from biological monitoring and any other incidental observations;
- Any additional habitat enhancement measures deemed warranted;

- Any problems that require near-, short-, or long-term attention (e.g., invasive exotic pest plant removal, erosion control, trespass);
- Any adaptive changes in the monitoring or management program that appear to be warranted based on monitoring results to date; and
- A description of actions for which USFWS notification or approval was not needed, but were carried out during the year.

During the life of the Project, the IHMP and the LTHMP will have overlapping reporting requirements. It is anticipated that the reporting requirements for both plans will be combined into a single report for efficiency in preparation and USFWS review.

## **4.8.2 ADMINISTRATION**

### **4.8.2.1 Notification**

The Project Administrator shall be responsible for providing notification to the USFWS for any activities requiring USFWS review and approval. All efforts will be made to outline the activities for the coming 12 months in the annual report. If this is not possible, the Project Administrator will submit a separate letter to the USFWS with a written description of the activity, including when the activity will take place and what methodology will be used, as well as a map showing what areas will be targeted. The USFWS will have 30 days to contact the Project Administrator to discuss the activity if they do not approve. If the Project Administrator is not contacted within 30 days, the activity will be considered approved. Notification will be made either by fax, email, registered mail, or overnight transmittal.

### **4.8.2.2 Emergencies**

The Project Administrator is responsible for identifying emergency situations that require immediate action. Should an emergency situation arise that requires immediate action and would normally require that the USFWS be notified or have review and approval authority, the Project Administrator shall notify the USFWS verbally within forty-eight (48) hours, with written confirmation of the actions taken within five (5) business days. In these situations, "emergency" is a situation that would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship.

Should an emergency situation arise that requires immediate action in a wetland or waters of the U.S., but would normally require that a permit be obtained from the United States Army Corps of Engineers (ACOE), the Project Administrator shall notify the ACOE verbally within twenty-four (24) hours regarding the situation and the actions taken. The ACOE will be notified in writing of the actions taken and further actions (if any) proposed within five (5) business days. The Project Administrator will work with the ACOE to determine what, if any, further actions are necessary. The following applies as stated in the Code of Federal Regulations, Title 33, Chapter II, Part 325, Section 325.2 – Processing of Applications:

Emergency procedures – Division engineers are authorized to approve special processing procedures in emergency situations. An “emergency” is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unseen, and significant hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures.

California Fish and Game Code Section 1600 also has emergency procedure stipulations that may apply.

If an emergency situation does arise, the Project Administrator, Qualified Personnel, and the USFWS will meet to discuss the emergency situation. Management or monitoring changes will be coordinated by the Project Administrator, Qualified Personnel, and the USFWS, and be implemented based upon priority and available funding.

## **5.0 TRANSFER, REPLACEMENT, AMENDMENTS, AND NOTICES**

### **5.1 *Transfer***

The Project Administrator shall notify and receive approval from the USFWS of any subsequent transfer of responsibilities under this LTHMP to a different Project Administrator. Any subsequent Project Administrator will then assume all Project Administrator responsibilities described in this LTHMP, unless otherwise amended in writing and approved by the USFWS.

### **5.2 *Replacement***

If the Project Administrator fails to implement the tasks described in this LTHMP and is notified of such failure in writing by the USFWS, the Project Administrator shall have 90 days to cure such failure. If failure is not cured within 90 days, the Project Administrator may request a meeting with the USFWS to resolve the failure. Such meeting shall occur within 30 days or a longer period if approved by the USFWS.

### **5.3 *Amendments***

The Project Administrator and the USFWS may meet and confer from time to time, at the request of any of them, to revise the LTHMP, to refine the areas covered by the LTHMP, or to better meet management objectives and preserve the habitat and conservation values of the Conservation Sites. Any proposed changes to the LTHMP shall be discussed by the USFWS and Project Administrator. Any proposed changes will be designed with input from all parties. Amendments to the LTHMP shall be approved by the USFWS in writing, shall be required management components, and shall be implemented by the Project Administrator.

If the USFWS determines, in writing, that continued implementation of this LTHMP would jeopardize the continued existence of a federally-listed species, any written amendment to this

LTHMP, determined by the USFWS as necessary to avoid jeopardy, shall be a required management component and shall be implemented by the Project Administrator.

## **5.4 Notices**

Any notices regarding this LTHMP should be directed as follows:

### **Project Administrator:**

Maricopa Sun, LLC  
Contact: Jeffery Roberts  
1396 W. Herndon Avenue, Suite 101  
Fresno, CA 93711  
(559) 439-0900

### **Approving Resource Agency:**

United States Fish and Wildlife Service  
Contact: Justin Sloan, San Joaquin Valley Branch  
2800 Cottage Way, Suite W-2608  
Sacramento, CA 95825  
(916) 414-6600

## **6.0 FUNDING AND TASK PRIORITIZATION**

### **6.1 Funding**

The annual cost of monitoring and managing the Conservation Sites according to this LTHMP will be funded through the Endowment Account, held and managed by the Endowment Holder. The Endowment Account will be held in an interest-bearing account, such that the principal in the Endowment Account will generate sufficient interest to pay for the implementation of this LTHMP without drawing down the principal. The principal deposit necessary to manage the Conservation Sites is calculated using a “PAR-like” analysis.

The Project Administrator may use the interest generated by the Endowment Account to pay for activities associated with the management and operation of the LTHMP and the Conservation Sites in general. This may include, but is not limited to monitoring, maintenance, property taxes, contracts, equipment, fencing, signs, etc. Annual disbursements from the Endowment Account shall begin one full year following the full funding of the Endowment Account. The Endowment Account obligations, the management obligations described in this LTHMP, and the obligations under the Conservation Easement shall continue in perpetuity as a covenant running with the Conservation Sites. These costs include estimates of time and funding needed to conduct the basic monitoring site visits and reporting, habitat maintenance, trash removal, fence and sign repair, and a prorated calculation of funding needed to fully replace the fencing every 35 years.

The Endowment Account will be funded with a principal amount of \$5,017,059.55 dollars (MSHCP, Chapter 10, Section 10.3.3). The estimated cost for the implementation of the LTHMP

was determined by a PAR-like analysis. This analysis is used to determine the amount of funding necessary to establish a non-wasting Endowment, from which, the interest generated will be sufficient to implement the LTHMP. Individual Developers will be responsible for funding a portion of the Endowment as determined by the Project Administrator.

The LTHMP will initially be implemented on only the Conservation Sites, then, following decommissioning, the Solar Sites and Movement Corridors will also be managed for their habitat values according to the terms of the LTHMP. The Endowment will therefore be funded in two primary intervals; the Initial Funding will be sufficient for the management of the Conservation Sites, and then Supplemental Funding will be added to the Endowment to extend LTHMP management activities to the decommissioned Solar Sites and Movement Corridors. The Supplemental Funding will be placed in a separate interest bearing account where it will grow until the end of the term of the MSHP and then combined with the Initial Funding Endowment for the implementation of LTHMP activities on the Project.

## **6.2 Prioritization**

Due to unforeseen circumstances, prioritization of tasks, including tasks resulting from new requirements, may be necessary if insufficient funding is available to accomplish all tasks. The Project Administrator and the USFWS shall discuss task priorities and funding availability to determine which tasks will be implemented. In general, tasks are prioritized in this order: 1) required by a local, state, or federal agency; 2) tasks necessary to maintain or remediate habitat quality; and 3) tasks that monitor resources, particularly if past monitoring has not shown downward trends. Equipment and materials necessary to implement priority tasks will also be considered priorities. Final determination of task priorities in any given year of insufficient funding will be determined in consultation with the USFWS and as authorized by the USFWS in writing.

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